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AUTHOR	Ward, William G.
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ABSTRACT

The purpose of this paper was to review recent literature and research on inservice training for vocational education teachers and to draw from that synthesis, elements influencing inservice training. Topics reviewed included: (1) Historical Overview, (2) Theoretical Framework, (3) Recent Programs, (4) Innovative Techniques, (5) Some Problems and Solutions, (6) Planning, and (7) Evaluation Systems. Some conclusions from the review were: (1) The entire process of inservice education is not routinized, (2) Teacher autonomy is a major issue in inservice training, (3) Educators are relying more on electronic equipment for inservice training, (4) Planning and evaluation systems are inadequate, and (5) The problems of who decides what should be taught still faces educators today. It was recommended that state-wide systems of planning and evaluation be developed and that the problem, who decides what should be taught, be investigated. (SB)

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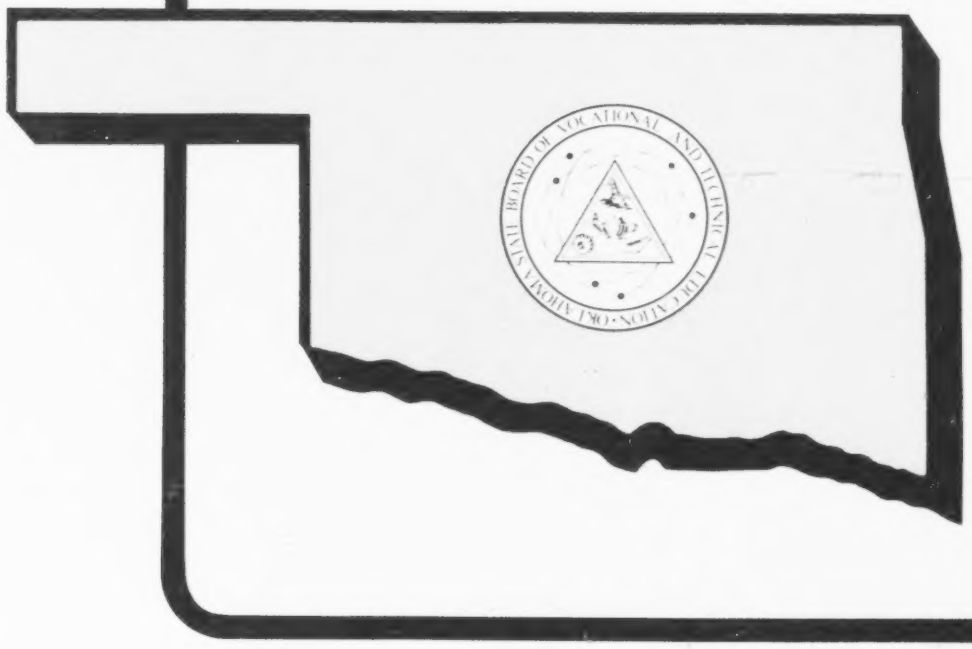
A REVIEW OF LITERATURE AND RESEARCH ON IN-SERVICE TRAINING FOR TEACHERS WITH EMPHASIS ON VOCATIONAL AND TECHNICAL TEACHERS

William G. Ward



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A Review of Literature and Research on In-Service Training for Teachers With Emphasis on Vocational and Technical Teachers

William G. Ward
November, 1972

Division of Research, Planning, and Evaluation
Oklahoma State Department of Vocational and Technical Education
Stillwater, Oklahoma 74074

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SECTION I

INTRODUCTION

The purpose of this paper is to reflect, via a synthesis, some recent literature and research on in-service training for teachers and to draw from that synthesis, in the form of findings, conclusions, and recommendations, elements influencing the in-service training of vocational and technical teachers. Two major sources of information were utilized in gathering the initial data. The first was the Educational Resources Information Center and the second was Rubin's (1971) edited book, Improving In-Service Education, which contains chapters by several well-recognized authorities in education.

Historical Overview

According to Ralph Tyler (1971), in-service training began a decade or so before the Civil War. During this period of commitment to universal elementary education, thousands of unprepared teachers were hired. Thus, through the 1870's, two- or three-day institutes and some night classes were used to bridge the gap between what teachers were expected to know and what they really knew. Most of the training was remedial and covered reviews of arithmetic, spelling, geography, history, ways to teach reading and writing, and principles of discipline. It appears that in-service training was technically oriented to subject matter and teaching skills.

The ideal teacher of that day was one who was always gaining new understandings of the old content and new skills in carrying on his work. This may have been modeled after the master craftsman approach which was prevalent in many occupations during that period. An analysis of the reports of those institutes indicated that veteran teachers showed greater interest than did beginning teachers. Also during this time period, the Morrill Act of 1862 was passed and its establishment of Land Grant Colleges was interpreted by Tyler (1971) as "the forerunner of the ideal that American Educational institutions should be expected to respond to the realities of social change."

From 1880 until World War I, summer courses in the normal schools became the important agencies for in-service education. The courses were more cosmopolitan than the institutes but still placed primary emphasis on the acquisition of knowledge and skills. This latter portion of the period in educational history saw the input of Dewey, Darwin, and the immigration into the United States of Europeans. This immigration, according to Tyler (1971), because children came to school with different attitudes, habits, and values, caused progressive educators to question our traditional system; and they set out to make allowances for those individual differences.

Francis W. Parker, first in Quincy, Massachusetts, and later at Chicago, lectured to summer classes of teachers on such topics as changing the schools from institutions that "imprison man in the cells of custom" to those that "free the human spirit." Burke, at San Francisco Normal, also lectured to summer classes of teachers on the extent of individual differences among pupils. He further established a demonstration school of individualized instruction. These programs stimulated Carleton Washburne, Helen Parkhurst, and Willard Beaty to develop programs of individualized instruction in Winnetka and the Dalton schools. Thus, during this time of change in America, in-service education became a change-agency with a primary role in the diffusion of new ideas rather than a "keeper of old customs." This is evidenced by Shelden, at Oswego, who was influential in spreading Herbart's views. The Sloyd conception of manual training was spread by the summer schools. Tyler (1971) observed that uptake in the public school curriculum of hygiene, civics, and vocational education were also the results of in-service training.

However, between World War I and the economic depression of the 1930's, in-service education was changed by the establishment of quantitative standards for teaching certificates. Hence, from 1918 until fifteen or twenty years later, most in-service training was structured so that college credits, counting toward a Bachelor's Degree, could be awarded. This action, according to Tyler (1971)

> "had a deleterious effect both on the institutions and on the teacher enrolled. Instead of planning for summer courses that were new and exciting to the professor who offered them, colleges and universities sought to identify and offer old courses that teachers had not taken previously. The teachers came not with the purpose of getting new insight, understanding, and competence, but rather with the purpose of getting certificates renewed by patching up their backgrounds."

The 1930's with the Eight-Year Study, the establishment of the Commission on Teacher Education by the American Council on Education, and various other related and

similar activities saw in-service training become concerned with developing curricula and educational procedures. Tyler (1971) noted that a major finding of that period was "constructive involvement of teachers in attacking real educational problems that they face is a powerful instrument of continuing education."

After World War II, in-service training, because of the increase in schools, again involved courses that would suffice certification requirements. Tyler (1971) noted that during the 1960's, in-service training revolved around implementation of national policies. This involved development of skills to work with the disadvantaged and ways to handle desegregation. Much less time being devoted to remedial training and in-service education may now be a way of achieving upward mobility in the educational professions. He also notes one continuing problem with in-service training: "Who shall determine the substance of activities that contribute to the continuing education of teachers?"

Theoretical Framework

Tyler's (1971) observation that contemporary in-service training is being used as a means for implementing social policy is reinforced by the writings of Thelen (1971), Thompson (1967), and Gibson (1967). A synthesis of their work indicates, in a descriptive and perhaps even heuristic-level model, that the institution of education was created via the interaction of society (physical world) and culture (world of values) for the purpose of fulfilling a specific function in this civilization. Further, for the institution to survive and maintain financial support, it must reflect the major values of the dominant cultures. However, this is not to say that the reflection of specific values are always imposed upon education. According to Thelen (1971), "The classroom is a small but complete piece of the larger society. It is swept by the same controversies, has the same values and behavioral norms as the community." Yet, the community, state, and nation, plus the local schools have, according to Thelen's modification of the Getzel-Guba model as explained by Gibson (1967), established certain expectations of the job-position of teachers. Thus, the purpose of in-service training, based on the theory, is to groom, socialize, or perhaps cause the individual teacher, generally by altering some of his own needs-dispositions, to become the ideal teacher that performs the job-functions of the role-position. Also, in a society that thrives on change, it may further mean the

job-functions may be continually changing; therefore, it would be necessary for in-service training to keep up with the changes.

A review of the stated purposes of in-service training, as written by practitioners, adds support to the theory. Lefforge (1971) titled his research as In-service Training As An Instrument for Change, which would seem to allude to its purpose. The Florida State Department of Education (Florida, 1971) wrote, "The purpose of in-service teacher education is to cause some, more or less, permanent changes in what a teacher knows, how he feels or how he acts, that will have a positive effect on his pupils." Edmonds (1966) sees "in-service as a vehicle for change." Scarborough (1966) in reporting on a seminar for thirty-five vocational educators from ten states, who had responsibilities for in-service education, noted they examined two dimensions of in-service education: (1) teacher as a change agent in the ongoing process of social change; and (2) as an integrating agent in terms of values and philosophical concepts. Jackson (1971) simply states that in-service training is a strategy for improving education.

Those stated purposes add evidence that the theory has some validity. Thus, with a defensible position that the purpose of in-service training is to close the gap between what the individual is and what the role expectations are, it is now reasonable to approach one unanswered question related to the theory. That question revolves around who or perhaps which entity, in reality, decides the nature of the role-expectation or job-functions. This is a similar question to the one posed by Tyler (1971) in an earlier section of this document. Some assumptions by Bush (1971) should be considered, but do not seem to answer the question.

(1) Education and schooling will become more, rather than less, important.

(2) Technology will so alter our way of life that fewer and fewer people will carry on what we formerly considered the productive work of the world.

(3) There will be a continued trend toward urbanization.

(4) The computer will become a major factor in education.

(5) The schools will become unlocked, and teachers will have substantially more time to work with individual pupils and with pupils in small groups.

(6) We will use teaching talent in a way that differs greatly from present usage.

An analysis of those assumptions by this reviewer indicate some commonality, in that more attention will be paid the individual inside a very aggregated and highly differentiated, while urbanized, society.

Generally, this could mean, again personal opinion, that as the population urbanizes and the number and types of cultural groups and occupational groups increase, the teacher may have to provide services for several diverse life-style groups. These groups or micro-cultures, if Toffler (1970) is correct, will probably be highly mobile and change quickly. Thus, the teacher, besides working with several groups in what Vance Packard calls A Nation of Strangers will also be caught up in rapid-change situations. It appears that it would be quite difficult to group teachers together under the control of one university, state department, or large school district and give them meaningful group in-service training. It seems that almost each teacher would have to define and later redefine the types of training he needs. How could one person establish a program to meet the real needs of all the teachers? A review of the activities of several recent in-service programs and techniques may be of use at this point.

Recent Programs

A brief survey of a few classification systems for in-service activities may cause the listing of programs to be more meaningful. Borg (1968) noted three aspects of teacher education: (1) curriculum content, which is knowledge of the subject matter to be taught; (2) professional knowledge, which includes educational psychology, philosophy, et cetera; and (3) classroom skills, which generally cover teacher behavior. A 1966 publication by the National Education Association (NEA, 1966) listed nineteen types of in-service training: classes and courses, institutes, conferences, workshops, staff meetings, committee work, professional reading, individual conferences, visits and demonstrations by outside parties, field trips, travel, camping, work experience, teacher exchanges, research, professional writing, professional association work, cultural experiences, and community organization work. Bush (1971) observes the four forms that current in-service training takes are: (1) expository exhortations, (2) demonstration teaching, (3) supervised trials, and (4) analysis of performance.

A project reported by Sciara (1972) was titled Triple I for Indianapolis Individual In-service. Five learning products were established based upon areas identified by the

teachers through the use of an "In-service Interest Inventory" and follow-up interviewers. One of the significant findings was that teacher attitudes appeared to be the greatest determinant of success or failure of the project. That is hardly a new finding. Also, the project was based on the premise that teachers and administrators at the building level must be the people who identify problems from which the content for in-service training is developed.

Thurber (1971) investigated the third phase of Project In-Step which was intended to develop a viable model for individualized, multi-media in-service training. The project involved the field testing of an individualized model, through a course in Management of Instructional Systems. Out of eighty-five teachers in the Palm Beach County School Systems, Florida, 93 percent developed a management system based on the training, and all completed at least one of the modules with a mastery of its contents, and 98 percent indicated a change in their classroom behaviors. The article did not state whether the participants were volunteers or not which could have influenced the outcome. However, the study does indicate that given a goal--you know when it is reached; that finding is not exactly new either.

Syhlman (1971) describes an internship exchange program for vocational teachers in Washington State. It is designed to give vocational teachers experience in industry. A similar program is operated by the Oklahoma State Department of Vocational and Technical Education. Dietz (1971) reported on a project in New Jersey where vocational teachers attended at institute where individualized instruction was used to teach the teachers how to develop performance objectives. Ten short-term institutes (Davis and Trout, 1971), each concerned with a specific area of vocational education, were offered during early 1970 in ten metropolitan areas. These included sections on: (1) program administration, planning, and coordination; (2) teacher education and leadership training; (3) disadvantaged youth and adults; (4) guidance and placement; (5) new concepts in vocational education; and (6) research utilization. Fifty-nine participants from 31 states attended a program on the improvement of vocational education at the post-high school level (MacArthur, 1970). It was conducted by an agricultural and technical college in New York.

Programs conducted under the Education Professions Development Act and Section 553 of the 1968 Amendments to the 1963 Vocational and Technical Education Act are too numerous for even a partial listing. However, some examples will be given. Los Angeles

Unified School District (LAUSD 1969) conducted a workshop dealing with the problems and methods of teaching minority group members. Oklahoma conducted a leadership series for practitioners (Ritter, 1972) in vocational education. The types of programs are varied and include almost every area and level of education.

Two institutes for new and inexperienced technical education administrators were conducted in 1969. These concerned developing and improving the participants' understanding of the philosophy of technical education, the technical educator's leadership role and how that role relates to program planning and development of continued leadership potential through in-service training (sic) (Miller, 1969). The institutes were conducted for two weeks each at the University of Michigan and in Texas. Eighty-nine administrators from 37 states attended. Apparently, additional institutes were also conducted in Utah and Mississippi (Miller and Valentine, 1968).

Reed and Wright (1968) reported on a project concerning the in-service training or perhaps re-orientation of business-skill teachers to cooperative office education. Matthews (1968) described a leadership development institute for Vocational and Technical Education personnel held at Oregon State University. Thirty-four individuals from twenty western states participated. Reynolds (1967) reported on a Rhode Island project where vocational teachers worked in establishing some activities in computer-assisted instruction. He noted difficulty with the hardware. Two six-week workshops were conducted during 1965 and 1966 at Oklahoma State University for 60 vocational agriculture teachers from 17 states. The purpose revolved around upgrading teachers in the distributive phase of off-farm agriculture (Hull, 1967).

The preceding has given a general survey of the actual types and levels of in-service training programs. Additional reports are Doherty (1967), O'Hanlon and Witters (1967), Bessent (1967), Dagne (1968), and Crockett (1968).

Innovative Techniques

An investigation of the literature indicated a few rather innovative techniques used in some programs. A listing of these may be of benefit. Most concern the delivery system for information to teachers or ways in which to individualize instruction and self-analysis. Jackson (1971) sets the stage with his "growth approach" which he describes as one where

> "teaching is a complex and multifaceted activity about which there is more to know than can ever be known by any one person...and the motive for learning more about teaching is not to repair a personal inadequacy as a teacher but to seek greater fulfillment as a practitioner of the Act."

Texas University (Peck, 1970) has a competency-based teacher training program where individualized programs are developed for each teacher-trainee. Polonski (1967) described a plan for the San Diego schools where teachers attended a film on teaching while their students attended a film on their subject matter. Pennsylvania has a mobile van equipped with a central computer and 15 terminals. It works the in-service training for rural schools; however, one year's cost was $250,000 (Lehmann, 1971).

Video-tape has become a major factor in many of the innovations. It is used in several ways relating to teacher classroom behavior. A teacher can tape his class and then self-analyze the tape (Parsons, 1971) with any of a hundred instruments that have been developed for classroom analysis.

Related to this is Shibata and Roberson's (1969) guide for self-analysis, which encompassed measurable objectives based on Bloom's Taxonomy and Johnson's (1969) model, emphasizing the affective domain. Additionally, microteaching which is teaching scaled down in duration and number of students, also uses video-tape to record the process for self or peer analysis. See Cooper and Allen (1971) for its history of development, Allen (1967) for a description, and Borg (1968) for its rationale. Implementation manuals have been developed by the Sufforlk County Regional Center (Sufforlk, North Dakota) and by Nebraska (Crandall and Shibata, 1969).

However, seven studies conducted by the Center for Vocational and Technical Education in Columbus, Ohio, (Doty and Cotrell, 1971) indicated that while microteaching is a valuable tool for in-service training, the feedback to the teacher is just as effective from peers, students, or teacher-trainers as from video-tape. All seem to work well. Related information, according to the Center, can be found in Acheson (1964), Aubertine (1964), Blanke (1967), Bruner (1964), Bush (1964), Cotrell (1971), Cruickshank (1967), Dixon (1967), Golhar (1969), McNemar (1962), Olivero (1964), and Winer (1962).

Television in its various forms has further been investigated for use in in-service training by King (1970) in a doctoral dissertation where he investigated the feasibility of using telelecture as a means of teaching a methods course to vocational teachers and by Wyoming (1970) University where cable television was used to transmit classes to rural areas. King's (1970) study indicated that telelecture was as effective, more economical, and as well

accepted by the teachers as were personal lectures by professors. However, the Wyoming (1970) study showed some mechanical problems with the Victor Electrowriter Remote Blackboard and a problem with the lack of face-to-face contact with the professor. Television and related media have been investigated by the State Department in Maryland (Bosley and Wigress, 1967). One use, indicated by the report, was for in-service training.

These types of techniques, while innovative in nature, have not solved all of the problems that many authorities and groups have identified. On the contrary, the problems are many and some have been covered in the literature.

Some Problems

The National Education Association (NEA 1966) listed teacher time, attitude, and pay as items that were not always adjusted to in-service training schedules. Also, the cost of the programs were not always budgeted and teachers were not always free to accept or reject the training. Bush (1971) draws attention to the lack of rigor that has accompanied most in-service education. Tyler (1971) sees a lack of support and as noted earlier he wonders who should determine what constitutes the activities. The following is a list of 76 problems listed by 35 leaders from 10 states who had responsibility for in-service training of vocational and technical teachers. The items are reprinted as listed in Scarborough's (1966) report.

1. Kinds of workshops, short courses, etc., best suited for upgrading classroom instruction. (We find many teachers do not know how to select equipment, plan layout and flow of work, use or instruct in the use of new equipment.)

2. Types of graduate programs fitted specifically to the needs of special vocational teachers--office occupations, etc.

3. Ways of providing work experience for in-service teachers other than uncoordinated summer work.

4. What role should school districts, teacher education departments, and supervisory staffs play respectively in a program of in-service education?

5. If in-serivce education is to be a role of teacher education departments, what are some activities that will help teachers in the field see the role that the teacher education department could assume?

6. Securing well trained personnel to help teachers with problems.

7. Inspiring teachers to want help.

8. Deciding on best methods for conducting an in-service program.

9. Determining type of assistance to give teachers in developing the occupational training and special needs programs.

10. Ways to help vocational teachers in different areas to develop a total vocational program in a community.

11. Encouraging teachers to keep themselves up to date professionally.

12. Role and scope of itinerant work in in-service teacher education.

13. Inducing older teachers to accept newer concepts in theory and practice.

14. Getting teachers to agree on the type of in-service courses or workshops needed.

15. Getting competent personnel to do effective in-service education.

16. Too many teachers feel that they are overloaded with teaching and extra-school activities. Therefore, finding time for in-service training is difficult.

17. Enlisting teachers who have been out of school for several years.

18. Exchanging innovative practices with others.

19. Financial assistance to teachers who already have master's degree.

20. Courses for credit during the school year, both in agricultural education and in technical agriculture.

21. How does one best proceed in creating the desire, within teachers, for their own self improvement?

22. What is a good procedure for setting up courses or workshops for improving teachers in technical competencies?

23. Methods for preparing: (1) teachers on the job for participation in occupational training; (2) subject matter specialists who would have occupational skills but who would need help with organization and methods of teaching.

24. Re-evaluation of in-service programs: (1) Work experiences; (2) Evaluation of occupational training programs.

25. Evaluation of programs to point up adjustments and revisions needed in light of the broader objectives of vocational education.

26. Ways and means of keeping teachers up to date technically and professionally.

27. Developing and maintaining desirable professional attitude.

28. Developing better understanding of vocational programs with guidance personnel and school administrators.

29. Teacher recruitment as a part of in-service education.

30. Personnel and scheduling.

31. Content materials.

32. Requisition for materials--equipment inventories and care.

33. Extent to which available credit courses may be used.

34. Methods of following up on implementation of in-service.

35. Program designs for high quality off-campus training programs.

36. Designs for the six-year program that cuts across all vocational services (between MS and EdD).

37. Develop evaluation instruments for teacher education.

38. Scheduling in-service teacher training for short term programs.

39. Selecting teaching materials for multiple occupations.

40. Teacher training for job-oriented basic education.

41. How to effectively help teachers work in groups when there is only one of his kind (subject area) in the state.

42. What to do for apprentice group study instructors.

43. Finding effective ways of helping teachers to keep abreast of present day developments in vocational education including subject matter, teaching methods, and groups to be reached.

44. Ways of correlating junior and senior high school programs.

45. Evaluating the effectiveness of in-service education now in progress.

46. Inventorying needs of vocational education personnel.

47. Means of individualizing in-service education (serving the isolated teacher).

48. Planning effective in-service education activities.

49. Types of programs of interest to all vocational teachers; i.e., new teaching techniques, team teaching, etc.

50. Funds for.

51. What preparation (professional and practical) is deemed necessary for teachers in vocational programs offering occupational training?

52. Clarification of the role of institutions of higher learning in the in-service education in relation to occupational instruction at the high school level.

53. The feasibility of offering some courses such as guidance, evaluation, supervision of work experiences, and other phases common to all areas of vocational education on a cooperative basis.

54. Guidelines for developing Occupational Education programs at various levels (high school, adult, vocational-technical schools, and junior colleges).

55. Planning and developing curriculums that are based on a job analysis that meets community needs.

56. Ways to help teachers evaluate their programs.

57. Teacher Certification.

58. Off-campus workshops, travel and time off by coordinators (funds for teachers to attend workshops and summer sessions).

59. Qualified personnel to use as guest instructors--"Time" to schedule workshops.

60. Ways and means of updating the technical skills of trade and industrial education teachers through in-service education.

61. Give some thought to offering general education courses to trade and industrial education teachers during in-service summer programs.

62. In-service program for state staff to increase their effectiveness in working with local schools.

63. Assisting local school systems with program planning.

64. Time element for teachers to meet.

65. Determining most critical needs of each individual teacher.

66. Securing appropriate resource people.

67. How can we bring business education teachers up to date in office technology and practices?

68. What materials are or can be made available to help business teachers instruct students in modern office technology?

69. How can teachers who are not eligible for entrance to some of our "high quality" graduate schools be assisted professionally so as to increase their earnings simultaneously?

70. Upgrading of researchers

71. Upgrading of education materials development personnel.

It is this writer's opinion that many items on their list could probably be aptly placed under other areas and further that several are not problems but simply areas of concern and interest.

Some Solutions

Many authorities have proposed programs, methods, techniques, and ideas that might assist one in overcoming some of the problems. Jackson (1971), in proposing his growth approach mentioned earlier, also ties it to more teacher autonomy with sufficient time off to participate in in-service training. He writes that: (1) programs of continuing teacher education should increase the number of instructional options, (2) programs of professional growth must provide the teacher with the time and tools necessary to conceptualize his experiences, to reach insights that alter his perception of his role and his task, and (3) the continuing education of the teacher should bear directly upon the problems he encounters in his work. Allen (1971) sees differentiated staffing as a possible solution. Lippitt and Fox (1971) emphasize the teacher should be involved in his own learning and should participate in identifying the growth experiences. Fischler (1971) stresses teacher self-analysis along with peer or supervisor analysis. He thinks that video-tape and tape recording could be well used in these situations. Fantini (1971) thinks the school is the real laboratory for professional growth, and we need to work for a closer bond between preservice and in-service learning and that the initiation of necessary change must stem from the deliberate intervention of administrators. Meade (1971) indicated four items of action: (1) Professional growth programs must equip teachers to accurately assess the quality of their performance. (2) The training supervisors who work with prospective teachers in the training institutions should continue the training relations after the teacher enters service. (3) A training specialist position concerned with the improvement of teaching should be routinized. (4) Continuing education, on a systematic basis, must become a routine aspect of professional life. Sorohan and Colbert (1966) favor, as do most others, individualized growth. Rubin (1971) wants a self-evolving teacher. Fischler (1971), who was previously mentioned as advocating self-analysis, also thinks that schools provide alternative and even rival systems of in-service education.

In another line of thinking, Sisk (1970) suggests that there may be a proper ratio of administrators to teachers during in-service training. Evans (1969) suggests that the "dead faculty member" might be motivated by better leadership. The Florida State Department (Florida, 1971) notes that when the teacher is ready to learn and has the opportunities and resources available, he will learn. Cory (N.D.) listed 25 items that might motivate teachers:

1. The total teacher load is adjusted so that the teachers can carry on without undue strain on their nerves and health.
2. A planned program of faculty and administrative assistance in the orientation of new teachers to the staff is an integral part of the school organization.
3. A salary schedule based upon training and experience is in full effect.
4. Administrators operate in a manner which makes teachers feel that they are an integral part of the school administration.
5. Teachers feel that suggestions and recommendations for administrative procedures made by individuals or committees will receive careful attention and often may be adopted.
6. Teachers participate in the formulation of educational policies.
7. Teachers who do outstanding work can expect to be promoted when vacancies occur.
8. The administration welcomes contributions by any or all teachers.
9. College or extension work for teachers is available at or near the school.
10. Encouragement is given teachers to attend meetings of professional organizations and groups in the teaching field and to participate in them.
11. There is a continuous, organized program of curriculum development.
12. Curriculum revision is based upon the results of the evaluation of educational needs and services.
13. Teachers and parents cooperate in the education process.
14. Teachers or teacher committees participate in the making of the salary schedule.

15. Provision is made for substitute service so that teachers may attend professional meetings and visit schools and classes.

16. Teachers are encouraged to evaluate their own work and to suggest improvements for their own programs.

17. Teachers have opportunities made available to improve their competence.

18. The administration makes a conscious effort to enable the staff to see the need for professional development and improvement.

19. Information on pupil achievement, progress, abilities and needs is available and used in curriculum revision.

20. Teachers are encouraged to carry on experimentation and research and feel free to do so.

21. Teachers are encouraged to utilize the resources of the community to the fullest extent in teaching and in planning courses of study.

22. Teachers are employed for more weeks than the regular school year.

23. Teachers are selected and promoted upon the basis of objective techniques and merit.

24. Groups of teachers work together in developing an integrated curriculum.

25. Parents and teachers have conferences in regard to the educative progress of the students.

It is obvious that the solutions do not always match the problems. Nor have systems been evolved that can answer Tyler's (1971) question as to who should decide the nature of training content. However, many of the authorities think the teachers should be deeply involved and perhaps autonomous. Another area that has been alluded to by several writers is the planning aspect of in-service training.

Planning

Michigan (Ferno, 1971) developed a "Vocational and Technical Education Personnel Development Needs" system. It projects from 1971-1975. Massachusetts University (Mass., 1970) has an exercise that allows educators to be trained, via simulators, on the planning

of in-service training. The University of Iowa (Monahan and Miller, 1970) conducted a five-state study that indicated the chief requirement, as far as teachers are concerned, was training to improve their teaching skill. Knoll and Stephens (1968), for the Utah Research Coordinating Unit, conducted a review of the in-service activities of several states and a survey of the teachers in Utah. They noted that New York had a scheduling procedure that assisted in coordinating in-service training and had developed a simple scheduling card for each teacher. It decreased repetition and allowed for determining the course needs of teachers.

The planning area does not seem to be well developed. Further, the next section, evaluation, is somewhat lacking in content.

Evaluation

It appears that as yet systems have not been developed. Some activities such as Brantner's (1964) survey of vocational teachers' opinions of in-service training and a similar study by Monohan and Miller (1970) are examples of the types of state-wide evaluations. More promising activities have occurred on specific programs where experimental research designs are used to test the entire process. Examples can be found in Pyatte (1972), Brown (1968), and Roberson (1969). The Ohio State Department has an example of a workshop evaluation (Ohio, 1970) and Bauman (1970) has a guide to instruments that have been used to evaluate in-service training.

The use of experimental research design, for in-service training programs, could be increased. However, for state-wide systems the problems have not even been identified nor have systems been developed.

This concludes the review section of this paper. It was lengthy, but portions of the literature do have merit. The next section will attempt to list important areas.

SECTION II

Findings

1. The literature is voluminous.
2. It appears that the current purpose of in-service training is to cause the individual teacher to change, to be more like the ideal teacher.
3. The question of who decides the content of training, thus more or less what the teacher should be, is still a major problem. Yet, many think that teachers should be self-directed.
4. It appears that almost any activity a teacher performs could be and is considered as in-service training.
5. The use of video-tape for self-analysis of teacher behavior or the use of peers and supervisors for analysis is well accepted.
6. Several innovative techniques have been developed. However, their generalizability is unknown.
7. Television, computers, and other types of electronic items are being used frequently for in-service training.
8. The lists of problems are longer than the list of solutions.
9. Authorities desire an in-service program where teachers are self-motivated.
10. Planning for in-service training, at any level, is not well developed.
11. Evaluation procedures at the state-level are not developed.
12. Evaluation procedures for programs could utilize experimental research designs.

Conclusions

1. The entire process of in-service training is not routinized. Only occasionally do organizations become interested in in-service training. It is a "step-child" type activity.
2. Teacher autonomy is a big issue in in-service training.

3. Educators are looking more and more to electronic items as ways to bridge the gaps.

4. It is doubtful if anyone can really tell where we are, what we have accomplished, or where we should go, because evaluation and planning systems have not been developed.

5. The same problems face educators today in in-service training as were faced 150 years ago. Who decides what should be taught?

Recommendations

1. State-wide systems of planning and evaluation should be developed.

2. The problem, who should decide what should be taught, should be investigated. There may or may not be any difference between the perception of teachers, administrators, students, professors, and the community on what should be taught to the teachers.

3. That if one does not now exist, then an autonomous professional organization devoted to in-service training should be developed.

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